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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.            | CONFIRMATION NO. |
|--|-------------|----------------------|--------------------------------|------------------|
| 10/713,788   | 11/14/2003  | Karl S. Reese        | 022956-0236                    | 8770             |
| 21125  | 7590        | 02/08/2006           |                                |                  |
| NUTTER MCCLENNEN & FISH LLP<br>WORLD TRADE CENTER WEST<br>155 SEAPORT BOULEVARD<br>BOSTON, MA 02210-2604 |             |                      | EXAMINER<br>MENDOZA, MICHAEL G |                  |
|  |             |                      | ART UNIT                       | PAPER NUMBER     |
|  |             |                      | 3731                           |                  |

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                    |                |  |
|------------------------------|--------------------|----------------|--|
| <b>Office Action Summary</b> | Application No.    | Applicant(s)   |  |
|                              | 10/713,788         | REESE, KARL S. |  |
|                              | Examiner           | Art Unit       |  |
|                              | Michael G. Mendoza | 3731           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 November 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-30 is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/13/2004</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 25 November 2005 have been fully considered but they are not persuasive. The Applicant argues that Steiner fails to disclose a suture anchor having a longitudinally extending bone-engaging surface feature formed thereon. The Examiner disagrees. The structures 18 of Steiner all have some degree of longitudinal extension. The claims do not give a minimum requirement for the how long the bone-engaging surface extends.
2. Applicant's arguments, see 8, filed 25 November 2005, with respect to claim 21 have been fully considered and are persuasive. The 102(b) rejections of claims 21-29 have been withdrawn.
3. The indicated allowability of claim 15 is withdrawn in view of Dinsdale 5733307. Rejections based on the newly cited reference(s) follow.

### ***Drawings***

4. The drawings were received on 25 November 2005. These drawings are accepted by the examiner.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

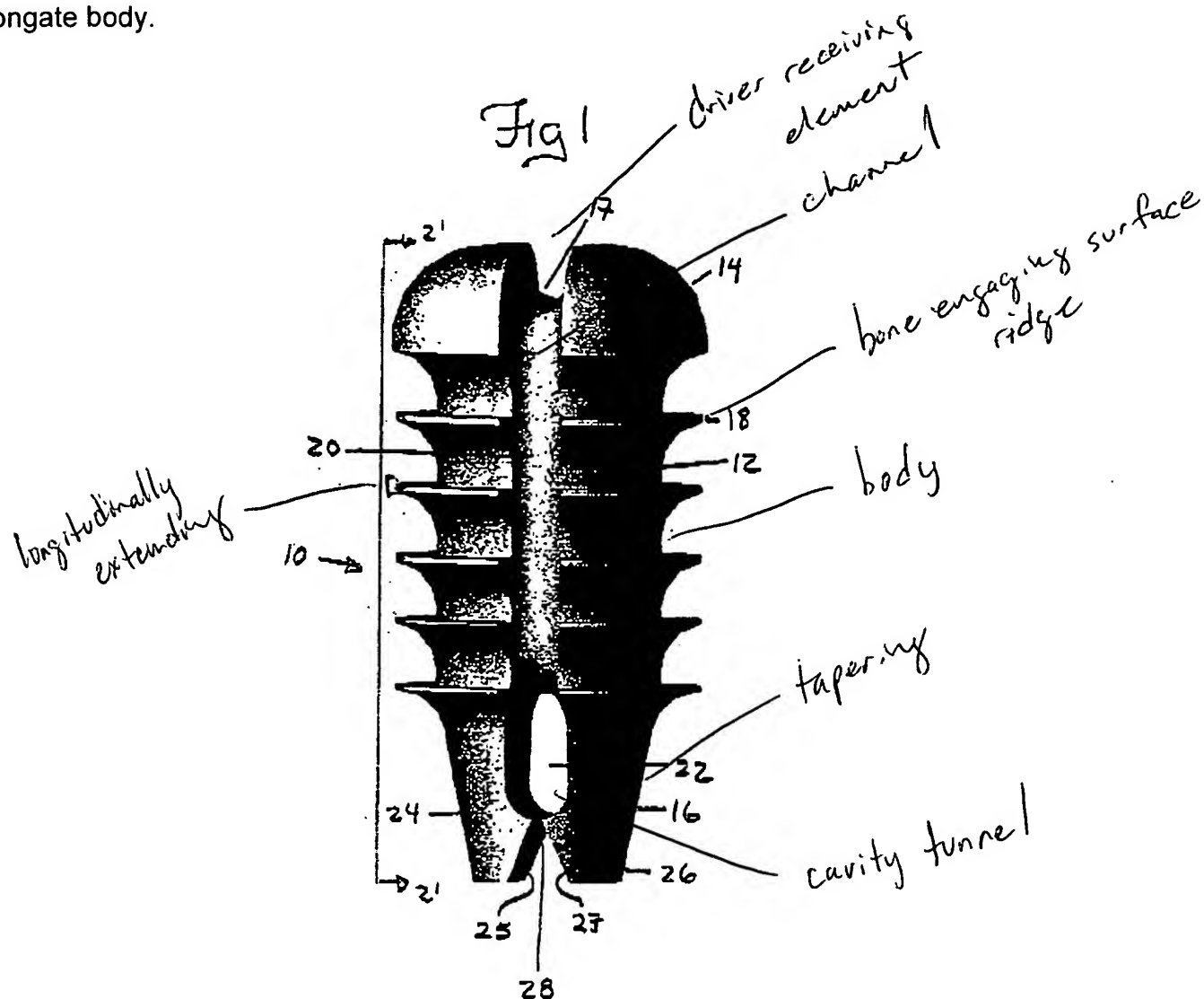
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6. Claims 1-8, 10, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Steiner US 2002/0161401 A1.

7. Steiner teaches a suture anchor system for anchoring tissue to bone, comprising: a substantially solid, elongate body having proximal and distal ends with a longitudinal axis extending therebetween, the body including at least one longitudinally extending bone engaging surface feature formed thereon; a continuous suture-receiving channel extending distally from opposed sides of the proximal end of the body around the distal end of the body; a first loop of suture thread freely-slidably disposed around the elongate body within the at least one suture-receiving channel, the suture loop including a proximal portion that is positioned proximal to the proximal end of the body; wherein the suture-receiving channel is adapted to seat the suture loop flush or sub-flush with an outer surface of the body; wherein the substantially solid, elongate body includes a plurality of longitudinally extending bone-engaging surface features formed thereon; wherein the suture-receiving is adapted to seat and engage the suture loop, yet allow slidable movement of the suture loop; wherein the suture-receiving channel includes a substantially concave cavity formed in a distal-most end of the body, the cavity fully capable of seating a knot formed in the suture loop; wherein the cavity is fully capable of seating the knot flush or sub-flush with an outer surface of the body; wherein the cavity has a substantially hemi-spherical shape; wherein the at least one longitudinally extending bone-engaging surface feature comprises at least one ridge; wherein the elongate body is substantially cylindrical and includes a distal tip portion that tapers in a

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distal direction; and a driver-receiving element formed in the proximal end of the elongate body.



8. Claims 1-8, 10-14, 16, 17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Tormala et al. 5957924.

9. Tormala et al. teaches a suture anchor adapted to be disposed within bone, comprising: an elongate body having a proximal end, a distal end, and at least one discrete bone-engaging surface feature formed thereon and adapted to engage bone; a

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transversely-extending suture tunnel formed proximal to the distal end of the body such that the distal end of the body has a substantially solid distal tip; first and second opposed suture-receiving channels formed in the body and extending from the proximal end of the body and terminating at the suture tunnel; and a suture loop disposed within the first and second opposed suture-receiving channels and the transversely-extending suture tunnel, the suture loop including a proximal portion positioned proximal of the proximal end of the body; wherein the first and second opposed suture-receiving channels are in communication with the suture tunnel; wherein the elongate body includes a plurality of discrete bone-engaging surface features formed thereon and adapted to engage bone; wherein the first and second opposed suture-receiving channels are adapted to seat the suture loop flush or sub-flush with an outer surface of the body; wherein the first and second opposed suture-receiving channels are fully capable of seating and engaging the suture loop, yet allow slidable movement of the suture loop; wherein the elongate body tapers from a proximal end to a distal end; and a driver-receiving element 4 formed in the proximal end of the elongate body.

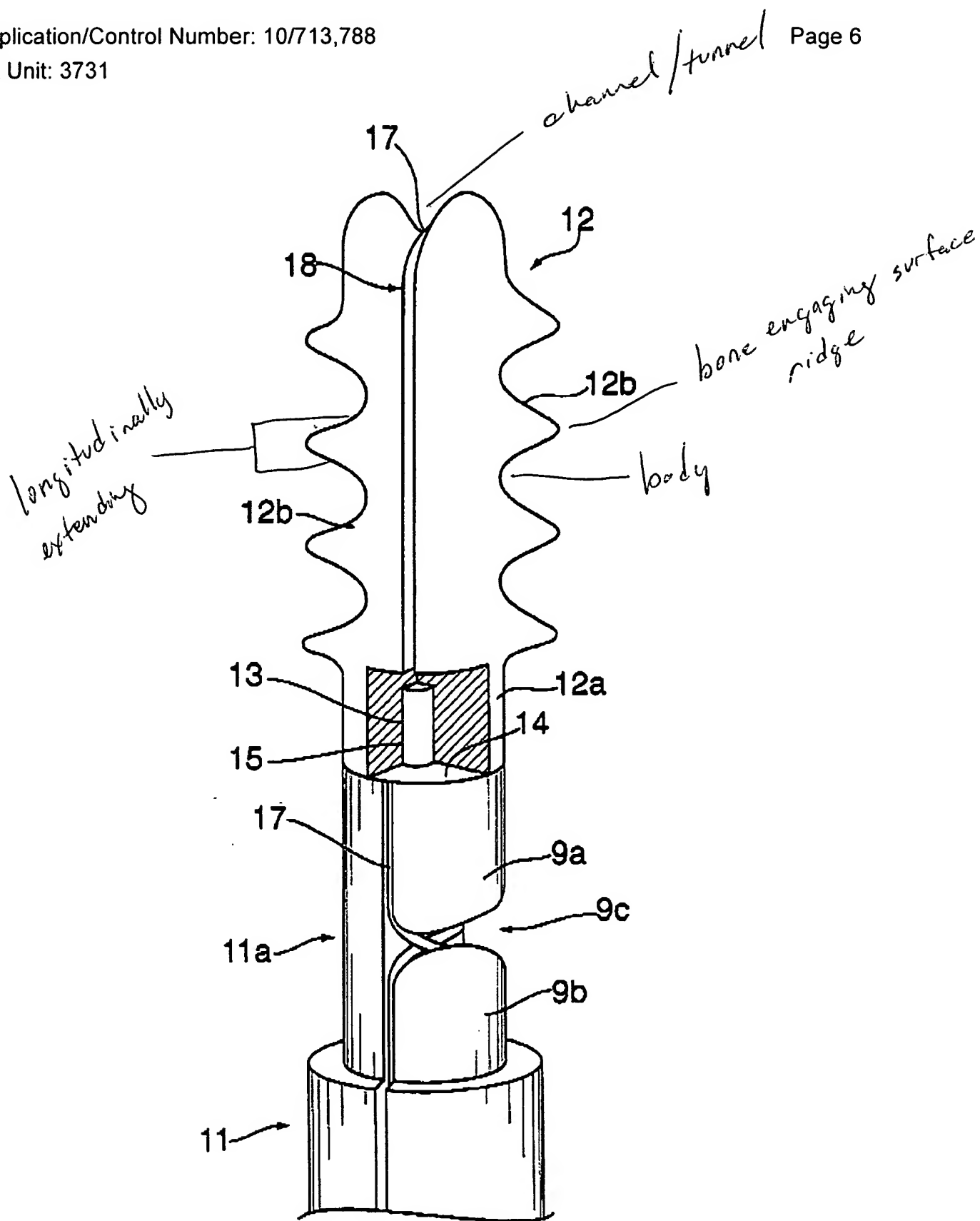


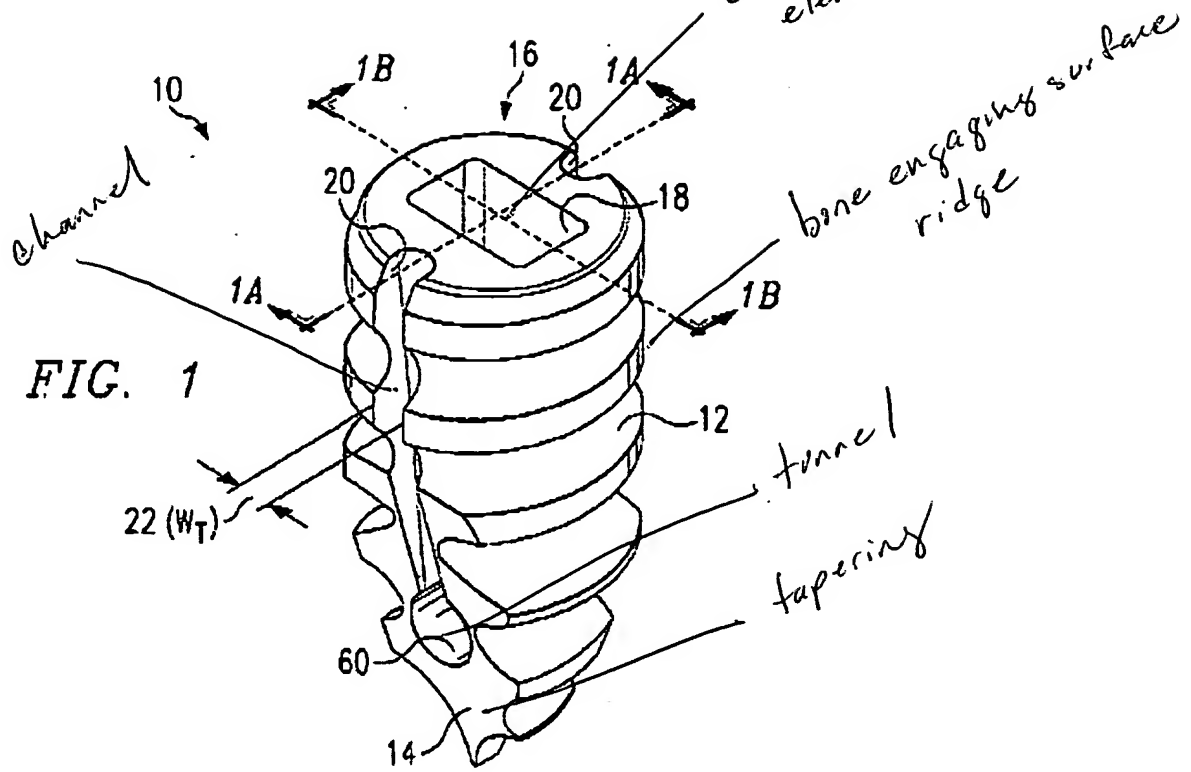
FIG. 4

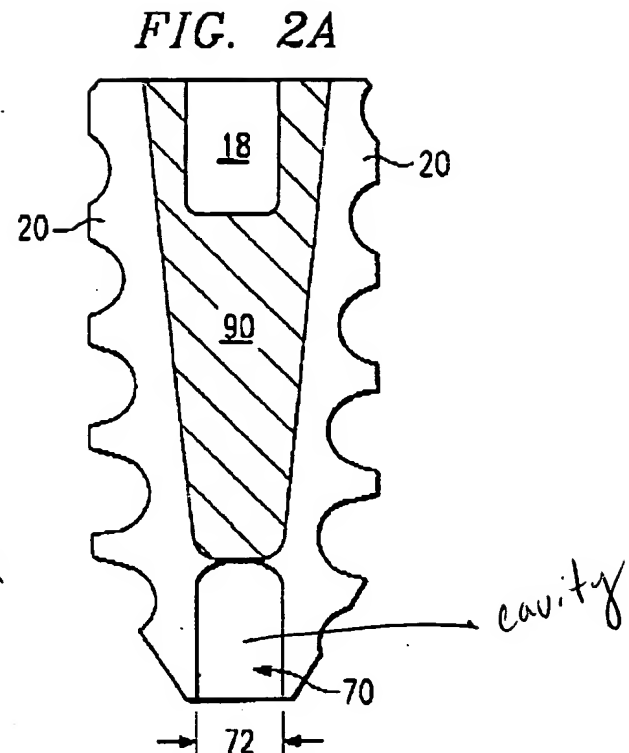
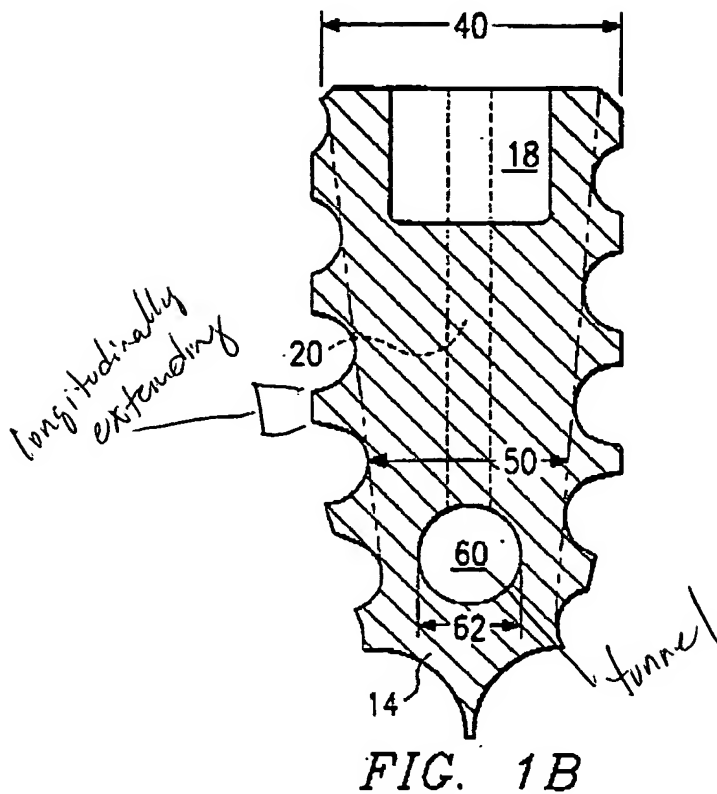
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10. Claims 1- 8, 10-17, 19, 20, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Dinsdale 5733307.

11. Dinsdale teaches a suture anchor adapted to be disposed within bone, comprising: an elongate body having a proximal end, a distal end, and at least one discrete bone-engaging surface feature formed thereon and adapted to engage bone; a transversely-extending suture tunnel formed proximal to the distal end of the body such that the distal end of the body has a substantially solid distal tip; first and second opposed suture-receiving channels formed in the body and extending from the proximal end of the body and terminating at the suture tunnel; and a suture loop disposed within the first and second opposed suture-receiving channels and the transversely-extending suture tunnel, the suture loop including a proximal portion positioned proximal of the proximal end of the body; wherein the first and second opposed suture-receiving channels are in communication with the suture tunnel; wherein the elongate body includes a plurality of discrete bone-engaging surface features formed thereon and adapted to engage bone; wherein the suture loop includes a knot that is positioned within the transversely-extending suture tunnel (col. 4, lines 20-41); wherein the first and second opposed suture-receiving channels are adapted to seat the suture loop flush or sub-flush with an outer surface of the body; wherein the first and second opposed suture-receiving channels are fully capable of seating and engaging the suture loop, yet allow slidable movement of the suture loop; wherein the elongate body tapers from a proximal end to a distal end; and a driver-receiving element 18 formed in the proximal end of the elongate body.







**Claim Rejections - 35 USC § 103**

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steiner or Tormala et al.

14. Steiner and Tormala et al. both teach the claims 1 and 17. Steiner and Tormala et al. both fail to teach wherein the at least one longitudinally extending bone-engaging surface feature comprises at least one discrete pyramid-shaped surface feature.

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However it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the longitudinally extending bone-engaging surface feature of Steiner or Tormala et al. a discrete pyramid-shape because the shape of the bone-engaging surface is a mere design choice and that any shape would perform equally well. Furthermore, the Applicant has not disclosed that the specific type of shape solves any stated problems or is for any particular purpose and it appears that the invention would perform equally well with the shape taught by Steiner, Tormala et al., or Dinsdale.

***Allowable Subject Matter***

15. Claims 21-29 are allowable over the prior art of record.

16. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or render obvious the overall claimed method for anchoring suture in bone, comprising: providing a suture loop extending around at least a portion of a body and positioned in a suture-receiving member such that a proximal portion of the suture loop is positioned proximal of a proximal end of a elongate body; providing an operative suture; passing the operative suture through the proximal portion of the suture loop; and implanting the suture anchor in a bone cavity such that the operative suture extends from the cavity and is freely slidable with respect to the suture loop.

**Contacts**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael G. Mendoza whose telephone number is (571) 272-4698. The examiner can normally be reached on Mon.-Fri. 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anh Tuan Nguyen can be reached on (571) 272-44963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MM

  
GLENN K. DAWSON  
PRIMARY EXAMINER